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ABSTRACT

Two pathways in the development of a scientific concept can be differentiated: the limited-operationalization approach, which capitalizes upon the availability of an instrument; and the popular consensus approach, which comes from a sudden interest and popularity of the phenomenon in the real world. The phenomenon of mentoring is a contemporary example of this second approach. The danger is that each group of researchers will generate its own definition of the concept, with little or no consensus between groups. To avoid this danger, three suggestions are made: (1) a theory of the monitoring process should be developed, emphasizing the various sources of variance in determining the effectiveness of the mentoring relationship, and recognizing that the process goes through a set of stages; (2) studies of the mentoring process should use multiple converging empirical operations; and, (3) only after clarifying the process, traditional methodological procedures could be used for further data gathering. (Author/BW)

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Research Methodologies for Assessing Mentoring

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(Paper presented as part of a symposium titled "Mentoring: Psychological Personal, and Career Development Implications," presented at American Psychological Association Convention, Los Angeles, August 1981. The author appreciates the comments of James M. O'Neil on an earlier draft of this manuscript.)

Two pathways in the development of a scientific concept can be differentiated. While their basic approaches are opposite each other, they share a common limitation in that they may lead to premature conclusions about the concept. One might be called the "limited-operationalization" approach; the other the "popular consensus" approach. A brief description of each of these pathways may be helpful in specifying how the process of mentoring might best be studied. Then later sections of this paper will propose other ways of developing and investigating the phenomenon of mentoring.

The first inadequate pathway capitalizes upon the availability of an instrument -- a test, a scale, a clinical procedure -- and administers or applies it to individuals or groups of people, to form conclusions about a concept. The results or responses to the instrument become an instant but limited operationalization of the concept. The availability of the instrument leads to a "bandwagon" effect, with many researchers administering the instrument and drawing overly-general conclusions from its findings. Only later is there concern expressed about the adequacy of this operational measure as an indicator of the theoretical construct. Donald Campbell (1969) was an early critic of this strategy, noting how researchers may fail to be aware of the imperfect nature of any individual measuring instrument. He labelled this process "definitional operationalism."

That is not to say that a given instrument or operational procedure does not have its own merits. Rather, the problem is with a premature assumption that the instrument is an isomorphic representation of the concept. A couple of examples may illustrate what I mean. The Taylor Manifest Anxiety Scale (Taylor, 1953), upon its publication in 1953, quickly became

a very popular measure of anxiety, but it was exploited for uses beyond its original purpose. The scale was constructed by asking five clinical psychologists to select items from the Minnesota Multiphasic Personality Inventory (MMPI) that might discriminate between highly anxious people and less anxious ones. Those items about which most of the psychologists agreed comprised the scale. The initial purpose of the scale was to serve as a research instrument, to validate a drive theory in which it was predicted that highly anxious and less anxious persons would perform differently on simple and complex tasks. The construct validity of the instrument for this goal was subsequently demonstrated.

But other researchers, like little boys with a new hammer, began to use the instrument for many other purposes, especially applying it as a measure of individual differences in anxiety, to be related to other instruments and to individual differences in performance. The type of validity required and the criterion standards for such uses differ from the construct validity reflected in the original purpose, but such distinctions were ignored. Concomitantly, investigators failed to ask themselves, "How am I conceptualizing anxiety?"

A more recent example is the Bem Sex Role Inventory (Bem, 1974). While it justifiably has spurred an interest in androgyny, the scale became widely used before concerns were published about the theoretical implications reflected in its scoring procedures (see, for example, Locksley and Colten, 1979, or Pedhazur and Tetenbaum, 1979). Does a collection of attributes reflect a concept of femininity, for example? Is the measurement of masculinity confounded with social desirability? Should persons who select

equally few "masculine" and "feminine" characteristics be labelled as androgynous? These are valid questions but, for some people, they may do little to dispel the assumption that the measure is the construct.

No instrument is free of error, and science advances by trying out procedures and discovering their limitations. By selecting the above as examples, I do not mean to be saying that they have not been useful contributions. Rather, my general point is that premature definition of constructs is self-defeating in the long run, as we have to backtrack in theory development.

The opposite pathway -- the "popular consensus" approach -- has its own limitations. Often times the motivation for the study of a phenomenon comes not from the sudden availability of an instrument, but rather from the sudden interest and popularity of the phenomenon in the real world. If the media start devoting their attention to a phenomenon (whether it be violence on television or Vietnam veterans or bystanders' "apathetic" reaction to an emergency), can social scientists be far behind? The phenomenon of mentoring seems to be a contemporary example. Many people are talking about it; the word "mentoring" is casually being dropped into conversations; and articles -- both popular and professional -- are appearing.

With regard to the development of the scientific concept, the danger is that of "everyone doing his or her own theory." Each group of researchers generates its own definition of the concept, often without adequate contemplation. With respect to communication between researchers -- an absolute necessity for the body of knowledge to grow -- there is a false sense of consensus, because at a superficial level everybody "knows" what mentoring

is. But closer examination indicates wide variation in operational definitions, leading to conclusions that are limited to the use of particular procedures. Furthermore, some basic conceptual decisions are ignored. The result is that the concept becomes devalued because people are using it loosely, without precision, and it may become a short-lived fad.

Let me, at this point, review some recent empirical investigations of mentoring, to illustrate these claims. Daniel Levinson (1978) is the one individual responsible for making salient the concept of mentoring. While he states in The Seasons of a Man's Life that "no word currently in use is adequate to convey the nature of the relationship we have in mind related to mentoring" (p. 79), he later (p. 97-101) indicates that the term mentor is used to refer to a teacher, sponsor, or advisor. Levinson states a number of conclusions (better put, hypotheses) about the nature of the mentoring process and the characteristics of the participants in the relationship. His observations are based on extensive interviews and psychological test results elicited from 40 men in four different occupations.

In contrast, Scheuneman (1980) collected all her data on mentoring and support systems via a mail questionnaire. The paper does not provide a theoretical definition of the construct. Mentoring was operationally defined by questions about the "number of kinds of support activities from one's major professor," the interest shown by the major professor after graduate school, and the collaboration with faculty in graduate school. Scheuneman was primarily interested in comparing the career support received by women and men in educational psychology. Based on responses of 213 women and 179 men, her questionnaire found that 13% of the men, but 22% of the women, reported little or no support from the major professor during

graduate school. Similarly, 65% of the men but only 46% of the women reported having a role model while in graduate school.

Clawson (1980) provides a much more developed and sophisticated definition of the mentoring process in his book chapter. He recognized the difficulty in describing and classifying developmental relationships but seeks a "relatively simple but fairly accurate conceptual approximation of developmental relationships in general, and of mentors and mentor-protege relationships in particular" (p. 145). After reviewing several conceptions, he reserves the term mentor for someone who plays more than one role; "part of the essence of the ... mentor-protege relationship {is} its comprehensiveness" (p. 147). A second significant aspect identified by Clawson may be called mutuality, specifically mutual respect, trust, and affection. Clawson reports the emotions identified by Levinson (1978, p. 100) as the ones a mentee or protege feels for a mentor in a "good enough" mentoring relationship: admiration, respect, appreciation, gratitude, and love. Likewise, "'good enough' mentors ... believe in their proteges, share their dreams, give their blessings on that dream, and create space in which proteges can work on their dreams" (Clawson p. 147).

While Clawson's theoretical analysis is rich and thoughtful, his methodology is rather conventional -- a pilot study of superior-subordinate relationships. It should be noted that the data used to refine the theory came from the study of a somewhat different phenomenon! The pilot study used a single setting, the headquarters of a nation-wide insurance company, and involved 11 different "superiors" with 3 or 4 subordinates each. The "superiors" were chosen on the basis of their reputation as either exceptional or ineffective developers of young managers. Each participant was

interviewed and was asked to complete a lengthy questionnaire. From these responses the following were extracted as characteristics of effective developmental relationships:

role complementarity, respect, trust, consistency, informality, openness with information, an optimal level of intimacy, frequency of interaction, and a larger perspective.

Similarly, the study of mentoring processes by Kathy Kram (1980) used a biographical interviewing method that incorporated elements of a clinical interview, a structured research interview, and an informal dialogue. Fifteen young managers (ages 26-34) were asked to nominate "one or two significant others who they viewed as significantly influencing their development." These older managers were then asked to participate in a parallel interview. Approximately four hours were spent with each member of the 18 mentoring relationships thus identified. From these, Kram identified three essential characteristics of these developmental relationships, reflecting the mutually enhancing nature of the relationships, the identifiable phases of the mentoring relationship, and the potentially destructive nature of the relationship when its complementary quality is lost.

A general statement about such studies -- and other recent investigations of mentoring -- elicits the following conclusions:

1. If a definition is provided, it is usually offered without indication of the sources for its formation.

2. Only a single type of procedure forms the raw data for conclusions.

3. The process is assumed to be "frozen in time," in the sense that there is no appreciation for the enfolding, stage-theoretical, nature of the mentoring relationship. Even if such a conceptualization is acknowl-

edged, measurement takes place at one time period and any "measurement" of phenomena over time uses retrospective procedures. What, instead, do we propose? First, a well-developed theory of the mentoring process, that emphasizes the various sources of variance in determining the effectiveness of the mentoring relationship and that recognizes that the process goes through a set of stages, so that the contributors to effectiveness may be different at one stage from another. The paper presented by James M. O'Neil (1981) at this symposium elaborates on this theory.

Second, we propose that the study of the mentoring process deserves the use of multiple converging empirical operations. The phenomenon is too rich, complex, and multi-staged for adequate description through the use of a single procedure. Furthermore, innovative methods need to be employed. In looking at the mentoring relationship between two individuals, the representational case method (Shontz, 1965, 1976, 1978; Spotts & Shontz, 1980) provides a procedure for studying individuals and their relationships to others in their full complexity. For example, we might apply the representative case method to specify the characteristics of a pure type (as proposed by Max Weber, 1949) and then carefully select and study mentoring relationships which manifest in the clearest possible way this pure and ideal type.

What takes place when a mentor and mentee interact? Observational procedures might be used to collect specimen records of such interactions. Ecological psychologists such as the Schoggens (1971) have developed a device by which an observer can dictate observations of a family dinner-table conversation without being a distracting factor. Similar procedures could be applied to mentor-mentee verbal interactions.

The collection of specimen records of social interactions by the Schoggens involves some interpretation and subjectivity, in that the recorder describes the activities and interactions rather than directly tape-recording them. A direct procedure would be to tape record the interactions and then do a content analysis (Krippendorff, 1980) of these interactions. Specifically, what kinds of evaluative terms are used? Direct verbs? What is the ratio of talking and listening by each participant? Can the emotional tone be rated? How long does the interaction last? What processes wax and wane over the various stages of the relationship? The field of content analysis has developed sophisticated procedures in the last decade; they should be applied.

Content analysis of interactions would be especially useful when combined with a critical-incidents technique. Mentors and mentees could each be asked, immediately after an interaction, to evaluate its success or satisfaction-level. The critical incidents technique can compare qualities in effective and ineffective mentoring. By such procedures may we determine whether the hypothesized processes of mutuality, congruence, and comprehensiveness really exist. The critical-incidents approach is especially useful when we assume that different determinants of effectiveness exist at each stage in the mentoring process.

A third procedure would be to utilize personal documents such as autobiographies, diaries, and collections of letters. An initial analysis of the autobiographies of eminent psychologists which I carried out last year (Wrightsman, in press) indicates that such a procedure needs further exploration. Few of these psychologists made much reference to their mentors. But students and advisors could keep diaries describing the ongoing nature of the relationship -- probably a more informative procedure

than the retrospective nature of an autobiography.

Once the process is clarified, then traditional methodological procedures might be more appropriate for further data gathering. The use of questionnaires, I would think, might be limited to survey work and broad screening. Questionnaires can be useful in getting a quick indication of such matters as a number of supervisees, time available for mentoring, office layout, age and sex of potential mentor and mentee, etc. But I doubt that a questionnaire is the proper instrument for studying participants' own views of the process. I imagine that many respondents are unwilling to take the time to describe their interactions and feelings in detail.

Instead, an interview seems the more appropriate procedure; it is better for revealing information that is both complex and emotionally laden (Kidder, 1981).

It is a crucial time for those of us who wish to understand the process of mentoring. There is a sufficiency of speculation already. Now we need to formulate comprehensive conceptual definitions and then apply a multiplicity of methods.

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